

Amendment to the Specification:

On page 1, before the section entitled "Field of the Invention" insert, This is a continuation of Application Serial Number 09/970,727 filed October 3, 2001.

On page 5, the paragraph beginning on line 13 has been amended as follows:

In the ~~forth~~ fourth approach a removable support material is deposited in particulate form, such as a powder, that is energized so as to fuse to form the part, with the ~~un~~-fused unfused powder acting as the support structure. This type of approach is described in, for example, U.S. Patent No. 5,252,264 to Forderhase et al. Undesirably, however, this approach is limited for use with sintered powder materials and is generally unsuitable in applications utilizing flowable solid modeling materials to build parts.

On page 10, the paragraph beginning on line 10 has been amended as follows:

As used herein, the term "a flowable state" of a build material is a state wherein the material is unable to resist shear stresses that are induced by a dispensing device, such as those induced by an ink jet print head when dispensing the material, causing the material to move or flow. Preferably the flowable state of the build material is a liquid state, however the flowable state of the build material may also exhibit thixotropic-like properties. A material is in a flowable state when the temperature of the material is above the ~~materials~~ material's melting point. The term "solidified" and "solidifiable" as used herein refer to the phase change characteristics of a material where the material transitions from the flowable state to a non-flowable state. A "non-flowable state" of a build material is a state wherein the material is sufficiently self-supportive under its own weight so as to hold its own shape. A build material existing in a solid state, a gel state, a paste state, or a thixotropic state, are examples of a non-flowable state of a build material is a state wherein the material is sufficiently self-supportive under its own weight so as to hold its own shape. A build material existing in a solid state, a gel state, a paste state, or a thixotropic state, are examples of a non-flowable state of a build material

for the purposes herein. A material is in a non-flowable state when the temperature of the material is below the ~~materials~~ material's freezing point. In addition, the term "cured" or "curable" refers to any polymerization reaction. Preferably the polymerization reaction is triggered by exposure to actinic radiation or thermal heat. Most preferably the polymerization reaction involves the cross-linking of monomers and oligomers initiated by exposure to actinic radiation in the ultraviolet or infrared wavelength band. Further, the term "cured state" refers to a material, or portion of a material, in which the polymerization reaction has substantially completed. It is to be appreciated that as a general matter the material can easily transition between the flowable and non-flowable state prior to being ~~cured~~. cured, however However, once cured, the material cannot transition back to a flowable state and be dispensed by the apparatus.

On page 11, the paragraph beginning at line 4 has been amended as follows:

A preferred build material and support material is disclosed in the concurrently filed U.S. Patent Application Number 09/971,247; filed October 3, 2001, under docket number USA.269 entitled "Ultra-Violet Light Curable Hot Melt Composition", which is herein incorporated by reference as set forth in full. The materials preferably have a melting point from about 45°C to about 65°C, a freezing point from about 33°C to about 60°C, and a jetting viscosity of about 10 to about 16 centipoise at the dispensing temperature. A preferred method and apparatus for dispensing the preferred materials to form a three-dimensional object and underlying support structure is disclosed in the concurrently filed U.S. Patent Application Number 09/971,337; filed October 3, 2001, under docket number USA.282 entitled "Selective Deposition Modeling with Curable Phase Change Materials", which is herein incorporated by reference as set forth in full. The preferred dispensing temperature is about 80°C.

On page 13, the paragraph beginning at line 15 has been amended as follows:

It is to be appreciated that ~~about~~ of the curable phase change build material formulations

contain between about 5% to about 25% by weight of a non-reactive wax. In the preferred embodiment, the non-reactive wax content is between about 10% to about 12% by weight, and is comprised of a urethane wax. However, other non-reactive waxes could be used such as carbon hydrogenated waxes, paraffin waxes, fatty ester waxes, and the like. The wax content is necessary in order to provide the appropriate phase change characteristics of the build material so that the material ~~would~~ will solidify after being dispensed. This wax, which does not cure when exposed to actinic radiation, is trapped within the cured matrix of the polymerized reactive components of the build material formulation.

On page 16, the paragraph beginning at line 3 has been amended as follows:

It was theorized that the discoloration occurs due to thermal stresses resulting during part cooling causing the wax content that permeates the matrix of cured build material to migrate to regions of lower compressive stresses during post processing. The liquid wax is believed to move in capillary like fashion towards regions of the part which remain above the freezing point of the build material composition. As the part cools rapidly below the freezing point, generally below about 70° C, the external regions cool before the internal regions of the part. As the outer regions cool and contract faster than the inner regions, the wax component in the build material is believed to migrate towards the inner regions of the three-dimensional object, and the inner portions then solidify with a substantially higher volume percentage of the wax component. It is believed that this produces objects undesirably having transparent edges and opaque centers. It is believed the transparent edges of the objects are from where the wax content had migrated ~~from~~, and the opaque centers of the objects are to where the wax content had migrated ~~to~~.